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INTERNATIONAL PRELIMINARY EXAMINATION REPORT
(PCT Article 36 and Rule 70)

REC'D 05 DEC 2005

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Applicant's or agent's file reference 62781A	FOR FURTHER ACTION See Notification of Transmittal of International Preliminary Examination Report (Form PCT/PEA/416)	
International application No. PCT/US2004/029124	International filing date (<i>day/month/year</i>) 03.09.2004	Priority date (<i>day/month/year</i>) 05.09.2003
International Patent Classification (IPC) or both national classification and IPC C08J5/18, C08L23/08		
Applicant DOW GLOBAL TECHNOLOGIES, INC. et al.		
<p>1. This international preliminary examination report has been prepared by this International Preliminary Examining Authority and is transmitted to the applicant according to Article 36.</p> <p>2. This REPORT consists of a total of 7 sheets, including this cover sheet.</p> <p><input type="checkbox"/> This report is also accompanied by ANNEXES, i.e. sheets of the description, claims and/or drawings which have been amended and are the basis for this report and/or sheets containing rectifications made before this Authority (see Rule 70.16 and Section 607 of the Administrative Instructions under the PCT).</p> <p>These annexes consist of a total of sheets.</p>		
<p>3. This report contains indications relating to the following items:</p> <p>I <input checked="" type="checkbox"/> Basis of the opinion</p> <p>II <input type="checkbox"/> Priority</p> <p>III <input type="checkbox"/> Non-establishment of opinion with regard to novelty, inventive step and industrial applicability</p> <p>IV <input checked="" type="checkbox"/> Lack of unity of invention</p> <p>V <input checked="" type="checkbox"/> Reasoned statement under Rule 66.2(a)(ii) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement</p> <p>VI <input type="checkbox"/> Certain documents cited</p> <p>VII <input type="checkbox"/> Certain defects in the international application</p> <p>VIII <input type="checkbox"/> Certain observations on the international application</p>		
Date of submission of the demand 01.07.2005	Date of completion of this report 05.12.2005	
Name and mailing address of the international preliminary examining authority:  European Patent Office - P.B. 5818 Patentlaan 2 NL-2280 HV Rijswijk - Pays Bas Tel. +31 70 340 - 2040 Tx: 31 651 epo nl Fax: +31 70 340 - 3016	Authorized Officer Schmidt, H Telephone No. +31 70 340-2461 	

**INTERNATIONAL PRELIMINARY
EXAMINATION REPORT**

International application No. PCT/US2004/029124

I. Basis of the report

1. With regard to the **elements** of the international application (*Replacement sheets which have been furnished to the receiving Office in response to an invitation under Article 14 are referred to in this report as "originally filed" and are not annexed to this report since they do not contain amendments (Rules 70.16 and 70.17)*):

Description, Pages

1-34 as originally filed

Claims, Numbers

1-31 as originally filed

Drawings, Sheets

1-7 as originally filed

2. With regard to the **language**, all the elements marked above were available or furnished to this Authority in the language in which the international application was filed, unless otherwise indicated under this item.

These elements were available or furnished to this Authority in the following language: , which is:

- ☐ the language of a translation furnished for the purposes of the international search (under Rule 23.1(b)).
- ☐ the language of publication of the international application (under Rule 48.3(b)).
- ☐ the language of a translation furnished for the purposes of international preliminary examination (under Rule 55.2 and/or 55.3).
3. With regard to any **nucleotide and/or amino acid sequence** disclosed in the international application, the international preliminary examination was carried out on the basis of the sequence listing:
- ☐ contained in the international application in written form.
- ☐ filed together with the international application in computer readable form.
- ☐ furnished subsequently to this Authority in written form.
- ☐ furnished subsequently to this Authority in computer readable form.
- ☐ The statement that the subsequently furnished written sequence listing does not go beyond the disclosure in the international application as filed has been furnished.
- ☐ The statement that the information recorded in computer readable form is identical to the written sequence listing has been furnished.
4. The amendments have resulted in the cancellation of:
- ☐ the description, pages:
- ☐ the claims, Nos.:
- ☐ the drawings, sheets:

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5. ☐ This report has been established as if (some of) the amendments had not been made, since they have been considered to go beyond the disclosure as filed (Rule 70.2(c)).

(Any replacement sheet containing such amendments must be referred to under item 1 and annexed to this report.)

6. Additional observations, if necessary:

IV. Lack of unity of invention

1. In response to the invitation to restrict or pay additional fees, the applicant has:

- ☐ restricted the claims.
☐ paid additional fees.
☐ paid additional fees under protest.
☒ neither restricted nor paid additional fees.

2. ☐ This Authority found that the requirement of unity of invention is not complied with and chose, according to Rule 68.1, not to invite the applicant to restrict or pay additional fees.

3. This Authority considers that the requirement of unity of invention in accordance with Rules 13.1, 13.2 and 13.3 is

- ☐ complied with.
☒ not complied with for the following reasons:

see separate sheet

4. Consequently, the following parts of the international application were the subject of international preliminary examination in establishing this report:

- ☐ all parts.
☒ the parts relating to claims Nos. 1-26 .

V. Reasoned statement under Article 35(2) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement

1. Statement

Novelty (N)	Yes: Claims	1-26
	No: Claims	
Inventive step (IS)	Yes: Claims	
	No: Claims	1-26
Industrial applicability (IA)	Yes: Claims	1-26
	No: Claims	

2. Citations and explanations

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see separate sheet

Box I

1. The following document is referred to in the present report; the numbering will be adhered to the entire procedure

D1 US-A-2003/55191

Box IV

2. The present application lacks unity (Rule 13(1) and (2) PCT) for the following reasons

2.1 Common technical concept of the present claims is a composition comprising a polymeric material for preparing films with low neck-in and high draw-down

Subject matter of independant claim 1 is

a) a polymeric material characterised by its rheology determined by linear least square regression

Subject matter of claim 27 is a composition of melt index>10

a) 10-25% of high pressure low density polyethylene characterised by its melt index, molecular weight distribution, Mw(absolute)/Mw(GPC) ratio and melt strength

b) 90-25% of a linear PE characterised by its density and melt index

2.2 This Authority considers that there are 2 inventions covered by the claims indicated as follows:

I: Claims 1-26 directed to a composition comprising polymeric material characterised by its rheology

II: Claim 27 directed to a composition of polymers (a) and (b)

2.3 The reasons for which the inventions are not so linked as to form a single general inventive concept, as required by Rule 13.1 PCT, are as follows:

The blends according claim 1 are supposed to solve the problem of producing films of low neck-in and high draw-down. The solution is to provide a polymer

composition having a CDF RI value <0.23 and a CDF LS fraction >0.07 . These values are fulfilled by example 1b, 1c and 1d, 9c, 12b-14. All the other examples are comparative with respect to the claimed subject matter of claim 1.

Inventive examples according the blends of claim 27 are example 1b-1i, example 9a-10, 11c, 12c-12e and 13-17.

Since not all of the inventive examples (either acc. claim 1 or 27) solve the problem of high draw-down and low neck-in, whereas some of the comparative examples (like ex. 3g-4a do), it is completely unclear which problem is solved by the present application.

It hence appears that the applicants problem is to prepare an alternative film of polyolefins.

This problem is solved in a very different manner by claim 1 and by claim 27.

Since the essential technical features of claim 1 are completely insufficient to distinguish the solutions acc. the present invention (i.e. those with low neck-in and high draw-down) from those of the prior, any document disclosing films with low neck-in and high draw-down can be considered as closest prior art.

Example 16 of D1 discloses polyolefin films of low neck-in and high draw-down. Merely choosing a parameter range as done in present claim 1 cannot be regarded as an inventive solution over D1, as long as there is no evidence for a technical effect arising from the choice of parameters. Claim 1 hence is obvious over D1.

2.4 The subject-matter of independent claim 1 hence is not inventive. Claim 1 does not contain any special or corresponding technical features making a contribution over the prior art. There are hence also no special technical features making a contribution over the prior art, which are common to the separate inventions. If such special technical features are lacking, the requirement of unity of invention as defined in Rule 13(2) PCT is lacking.

2.5 The following separate inventions or groups or inventions hence are not so linked as to form a general inventive concept:

1. Claims 1-26 as far as compositions comprising polymeric material characterised by its rheology are concerned
2. Claims 27-31 as far as a composition comprising polymers (a) and (b) are concerned

2.6 The applicant did not pay additional examination fees. The present report hence is limited to the invention first mentioned in the claims and searched by the IPE

Box V

3. Present claims 1-26 are not inventive with respect to Art. 33(3) PCT

3.1 Closest prior art is D1.

Distinguishing feature of claim 1 to D1 is the choice of a polymeric material having a rheology as defined in claim 1.

However, this choice of rheology does not result in a technical effect (see 2.3)

The problem to be solved by claim 1 hence is to prepare another polyolefin film

The choice of a parameter range without evidence for a technical effect is considered as arbitrary and cannot be the basis for an inventive step

Since not all of the inventive examples (either acc. claim 1 or 27) solve the problem of high draw-down and low neck-in, whereas some of the comparative examples (like ex. 3g-4a do), it is completely unclear which problem is solved by the present application.

In his letter of reply the applicant refers to known toughness and tensile properties of LLDPE to be associated with low-neck in and high draw down. However, claim 1 is not referring to polyethylene, but to all types of polymers. Since claim 1 does not refer to polyethylene it is also not relevant whether or not example 16 of D1 comprises linear low density polyethylene. It might be acknowledgeable that one of the examples of the present application performs better than those of D1. However, this does not mean that this is valid for the whole extent of protection of present claim 1 and D1. It seems that claim 1 is lacking essential technical features distinguishing the present invention from D1. The present claims hence are either not inventive (Art 33(3) PCT) or they are not clear or unsufficiently disclosing the invention (Art. 5 or 6 PCT)